

## LITERATURE CITED

- UESHIMA, N. 1968. New species of *Paracimex* (Cimicidae: Hemiptera). Pan. Pac. Entomol., 44: 47-50.
- USINGER, R. L. 1966. Monograph of Cimicidae (Hemiptera-Heteroptera). Thomas Say Foundation Vol. 7, Entomol. Soc. Amer., 585 pp.
- USINGER, R. L., AND J. CARAYON. 1967. Un Hémiptère Cimicidae nouveau d'Afrique centrale. Bull. de l'I.F.A.N. 29 (4), ser. A: 1688-1694.

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**The Status of *Bruchus distinguendus* Horn**  
(Coleoptera : Bruchidae)

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Whether *Bruchus distinguendus* Horn (1873) is a valid name for a distinct species has been unclear since the name was listed in Leng (1920) as a synonym for *Acanthoscelides* (*Bruchus*) *obsoletus* (Say 1831). I recently examined the two syntypes of *B. distinguendus* and found one to be *A. obsoletus* and the other to be a separate and distinct species. Bottimer (1968), after examining the above types, came to the same conclusion and designated the latter specimen as lectotype for *B. distinguendus*. This specimen is redescribed and other specimens which I consider to be members of the same species are described below.

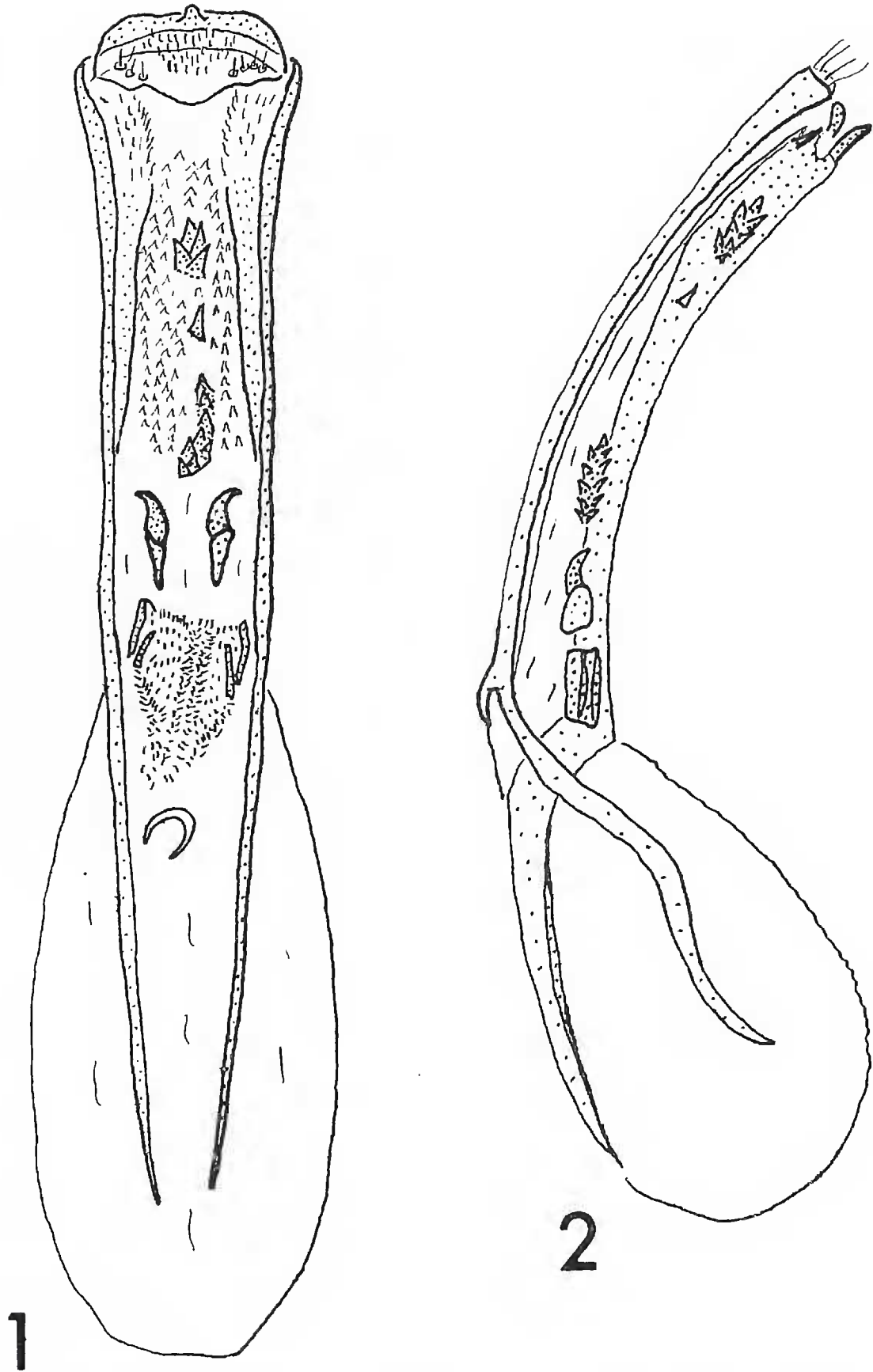
ACANTHOSCELIDES DISTINGUENDUS (Horn)

*Bruchus distinguendus* Horn, 1873:336 (Georgia); Fall, 1910:171 (in key), 178; Blatchley, 1910:1238 (in key), 1239; Pic, 1913:24; Johnson, 1968:1267.  
*Mylabris obsoletus*: Leng, 1920:305.  
*Acanthoscelides distinguendus*: Bissel, 1940:846; Bottimer, 1968:286; Johnson, 1968:1266.

MALE (LECTOTYPE).—*Integument Color*.—Head reddish-brown with frons and vertex dark brown, basal three antennal segments red-brown, apical eight dark brown; body and all coxae brown; pro- and mesothoracic femora, tibiae and tarsi red-brown; metathoracic femur, tibia and tarsus light brown.

*Vestiture*.—Head with white hairs; pronotum with dense intermixed white and golden hairs, sparse along dorsal midline; elytron with patches of brown, white and golden hairs, dense white patch between second and third stria about one-third from base and extending to one-third from apex; brown hairs forming bands one-fourth from base, one-half from base and one-fourth from apex; underparts and pygidium with dense white pubescence.

*Structure, Head*.—Elongate, densely punctulate; carina extending from frontoclypeal suture to vertex; vague transverse sulcus between upper limits of eyes; distance between eyes slightly less than width of eye; eye cleft to about three-



FIGS. 1-2. *A. distinguendus* male genitalia. FIG. 1. Ventral view median lobe and endophallus. FIG. 2. Lateral view median lobe, endophallus and parameres.

fifths its width by a vertical white pubescent sulcus above antennal base; in lateral view venter of eye parallel with imaginary posterior extension of line parallel with ventral surface of labium; antennal segment one filiform, two

moniliform, three subserrate, four through eleven serrate; segment two one-half as long as first, remaining segments subequal in length; antenna almost reaching apex of elytron.

*Prothorax*.—Disk campanulate; punctate with narrow punctulate fringe at apex; with short median impressed line anterior to basal lobe.

*Meso- and Metathorax*.—Scutellum subquadrate, clothed with dense recumbent white hairs; elytron twice as long as broad; striae deep, punctate, strial intervals punctulate; striae three and four, and five and six closer to one another at base than to adjacent striae; humerus punctulate with scattered punctations, sparsely pubescent, dark brown; mesepimeron, mesepisternum, metasternum and metepimeron punctulate, metepisternum punctate; hind coxa punctate; hind femur constricted basally and apically, expanded medially to slightly more than width of coxa (fig. 5); ventral surface with a carina on inner edge, apex with an acuminate spine about two times as long as width of tibial base and two smaller spines about one-third as long as the first on inner edge; tibia with lateral, anterior, posteromedial and anterolateral carinae, anterior and anterolateral carinae separated by a shallow sulcus; apex with three spinules and an attenuated straight spine reaching to one-fourth the length of the first tarsomere; slightly sinuate at base of spine; first tarsomere with anterior and lateral glabrous carinae.

*Abdomen*.—First sternum not visible, second, third and fourth of equal length, fifth shorter, emarginate; pygidium punctate, base depressed below base of last sternum, convex in lateral view.

*Genitalia*.—Not dissected.

*Length, pronotum-elytra*.—2.5 mm.

RANGE OF OBSERVED VARIATIONS.—*Integument Color*.—Head uniform reddish-brown varying to uniform dark brown; basal four antennal segments red-brown; body and all legs red-orange to body dark brown and legs dark reddish-brown.

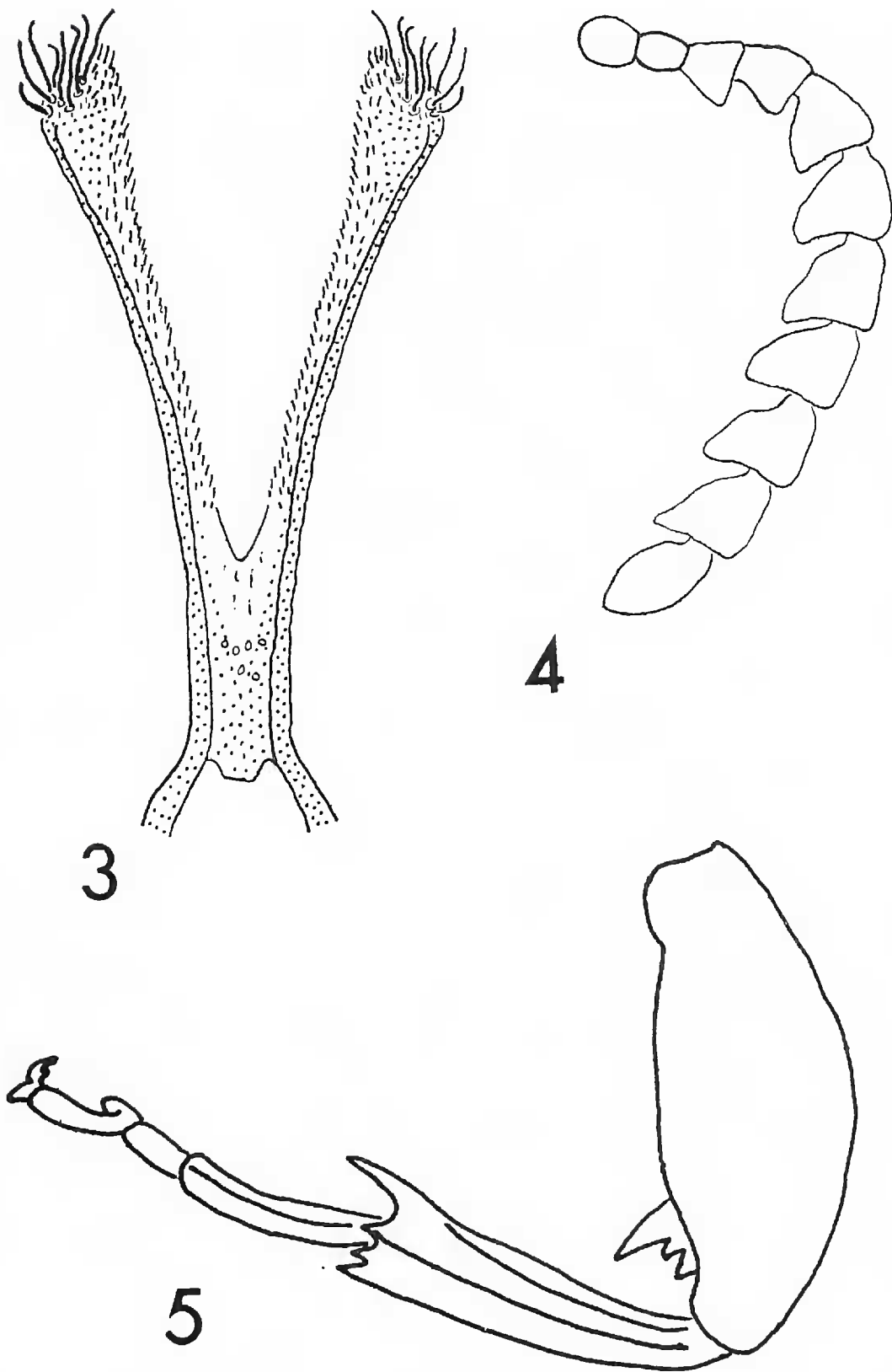
*Vestiture*.—Head with light yellow hairs; pronotum with moderately dense to dense white to light yellow hairs, hairs along dorsal midline light brown to golden-brown; elytron with patches of white, light yellow and dark brown hairs, dense white patch between second and third stria about two-fifths from base and extending to two-fifths from apex, sometimes faint; light brown hairs forming bands one-fourth from base, one-half from base and one-fourth from apex, sometimes faint; underparts and pygidium with dense white to light yellow pubescence, usually more dense on lateral margins of sterna and along midline of pygidium.

*Structure, Head*.—Antenna (fig. 4) reaching to middle of elytron.

*Prothorax*.—Impressed line usually obscured by pubescence.

*Meso- and Metathorax*.—Scutellum quadrate to slightly longer than broad; striae three and four usually closer to one another at base than to adjacent striae; humerus usually glabrous, ground color usually darker than adjacent surfaces; hind femur sometimes expanded medially only to width of coxa; carinae on femur, tibia and first hind tarsomere sometimes faint; large sub-apical femoral spine one and one-half to two times longer than width of tibial base, two smaller spines occasionally two-fifths as long as large spine; large spine at apex of hind tibia sometimes one-third the length of first hind tarsomere.

*Abdomen*.—First sternum usually slightly flattened medially, slightly longer



FIGS. 3-5. *A. distinguendus*. FIG. 3. Ventral view parameres. FIG. 4. Male antenna. FIG. 5. Hind leg.

than remaining sterna; sternum two usually slightly longer than three and four.

*Genitalia*.—Figs. 1, 2, 3.

FEMALE.—Similar to male except antenna reaching to humerus or slightly beyond; first abdominal sternum usually not flattened medially, about as long

as or slightly shorter than remaining sterna; last abdominal sternum sub-emarginate.

*Length, pronotum-elytra.*—1.9 to 2.5 mm.

*Host plants.*—Vial seeds *Dolicholus erectus* Walter: Leon Co. Fla., July, 1924 (C. O. Handley). Ex seed *Mimosa strigillosa* Torrey & Gray: Texas: Cameron Co.: Brownsville, June '21 (J. C. Bridwell).

*Literature.*—*Cracca virginiana* Linnaeus: Cushman, 1911:506; Blatchley, 1910:1239. *Rhynchosia erecta* and *R. intermedia*: Bissel, 1940:846. *Rhynchosia latifolia* Nuttall: Cushman, 1911:506.

*Location of Type.*—Lectotype 8206, Museum of Comparative Zoology, Cambridge, Massachusetts.

*Specimens Examined.*—35, from the following localities: *Florida*: Duval Co.: Jacksonville. Flagler Co.: Crescent City, April 1908. Gadsden Co.: Quincy, 10 July 1939. Jackson Co.: Alford, 9 July 1939. Leon Co., July 1924. Nassau Co.: Hilliard. *Georgia*: Bibb Co.: 10 August 1964, light trap. *Louisiana*: Nacogdoches (*sic*), 10 July 1907. *Mississippi*: Choctaw Co.: Weir, 14 July 1921. *North Carolina*: Moore Co.: Southern Pines, 10 April 1917. *South Carolina*: Bamberg Co.: Rivers Bridge St. Pk., 27 June 1965. *Texas*: Aransas Co.: Rockport, 7 August 1928. Cameron Co.: Brownsville, June 1921. Gregg Co.: Longview. Colorado Co.: Columbus, 4.6. Kenedy Co.: 29 mi. South Sarita, 14 April 1950. Nacogdoches Co.: 15 mi. E. of Nacogdoches, 7 April 1963. Nueces Co.: Corpus Christi, 17 July 1954.

DISCUSSION.—When critically examined this species is not to be confused with any other bruchid in our United States fauna. It most closely resembles *A. obsoletus* but the following characters separate the two species. *A. obsoletus* has (1) a spine at the apex of the hind tibia which extends to one-third the length of the first hind tarsomere; (2) two small spines at the bases of elytral striae three and four; (3) usually a distinct red spot behind the eye; (4) a larger, more quadrate scutellum; and (5) distinct male genitalia. *A. distinguendus* has (1) a spine at the apex of the hind tibia which usually only reaches to one-fourth the length of the first hind tarsomere; (2) no small spines at the bases of elytral striae three and four; (3) no distinct red spot behind the eye; (4) a smaller, more elongate scutellum; and (5) distinctly different male genitalia (figs. 1, 2, 3).

The male genitalia of *A. distinguendus* have an elongate median lobe and an obtusely rounded ventral valve with a small median projection (fig. 1), which extends ventrally in lateral view (fig. 2). A group of spines and spinules in the endophallus are distinct. This armature varies little among specimens except in some there are three curved spines medially rather than the two shown in fig. 1. The basal endophallic "brush" is characteristic of many species currently assigned to the genus *Acanthoscelides*. The genitalia have a characteristic curvature in lateral view (fig. 2) and the parameres are cleft to two-thirds their length (fig. 3).

As this species has been confused with *A. obsoletus*, the host plant *Cracca (Tephrosia) virginiana* is probably in error as a host for *A. distinguendus*. As pointed out by Kingsolver (1968), *A. obsoletus* breeds in the seeds of this plant. The record of *Rhynchosia latifolia* as a host for *A. distinguendus* is probably correct (personal communication, J. M. Kingsolver). As the Index Kewensis lists *Dolicholus* as a synonym of *Rhynchosia*, and Bissell has reared them from this plant, the record of *Dolicholus erectus* as a host plant would seem to be valid.

External structural characters of both *A. obsoletus* and *A. distinguendus* resemble more closely those of *A. fumatus* (Schaeffer 1907), *A. griseolus* (Fall), *A. prosopoides* (Schaeffer), and *A. rufovittatus* (Schaeffer) than they do other species at present included in *Acanthoscelides*.

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#### LITERATURE CITED

- BISSELL, T. L. 1940. Curculionidae, Bruchidae, Lepidoptera, and their parasites, infesting the seed pods of cowpea and various wild plants. Jour. Econ. Entomol., 33: 844-847.
- BLATCHLEY, W. S. 1910. An illustrated and descriptive catalogue of the Coleoptera or beetles known to occur in Indiana. Bull. Indiana Dept. Geol. and Natur. Resources, Indianapolis, 1385 pp.
- BOTTIMER, L. J. 1968. On the location of types of five species of Bruchidae with notes on early American literature of *Acanthoscelides obtectus*. Can. Entomol., 100 (3): 284-289.
- CUSHMAN, R. A. 1911. Notes on the host plants and parasites of some North American Bruchidae. J. Econ. Entomol., 4 (6): 489-510.
- FALL, H. C. 1910. Miscellaneous notes and descriptions of North American Coleoptera. Trans. Amer. Entomol. Soc., 36: 89-197.
- HORN, G. H. 1873. Revision of the Bruchidae of the U. S. Trans. Amer. Entomol. Soc., 4: 311-342.
- JOHNSON, C. D. 1968. Bruchidae type specimens deposited in United States museums with lectotype designations (Coleoptera). Ann. Entomol. Soc. Amer., 61 (5): 1266-1272.
- KINGSOLVER, J. M. 1968. A review of the *obtectus* group in *Acanthoscelides* Schilsky, with designations of lectotypes (Coleoptera: Bruchidae: Bruchinae). Proc. Entomol. Soc. Wash., 70 (1): 4-9.

- LENG, C. W. 1920. Catalogue of the Coleoptera of America North of Mexico. New York, 470 pp.
- PIC, M. 1913. Bruchidae. Junk, Coleopterorum Catalogus. pars 55, 74 pp.
- SAY, T. 1831. Description of North American Curculionides and an arrangement of some of our known species agreeably to the method of Schoenherr. New Harmony, Indiana, 30 pp.
- SCHAEFFER, C. F. A. 1907. New Bruchidae with notes on known species and list of species known to occur at Brownsville, Texas, and in the Huachuca Mountains, Arizona. Mus. Brooklyn Inst. Arts and Sci., Sci. Bull., 1 (10): 291-306.

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**A New Species of *Criorhina* Meigen from California**  
(Diptera : Syrphidae)

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Curran (1924) revised the genus *Criorhina* Meigen and recognized sixteen species. In the Diptera Catalog (1965) of America North of Mexico are now held fourteen species. This paper deals with an additional undescribed species of *Criorhina* in the California Insect Survey Collection. The type will be deposited in the California Academy of Sciences.

***Criorhina rufocaudata* Nayar and Cole, new species**  
(Figs. 1, 2)

FEMALE.—Length, 18.33 mm. Wing length, 13.33 mm. Front dark-brown; vertex slightly shining black; front and vertex with brownish-yellow pile. Ocellar triangle area dark, ocelli light brown. Occiput densely light yellow. Face produced, slightly concave below antennae; facial tubercle extremely reduced, narrow shining black stripe medially; golden pollinose along sides from antennal bases to about its tip; black pile along eye margins. Eyes dark with brownish hue; bare. Antennal prominence shining black along outer border and brownish pollinose inwardly; antennae small, dark-brown; first segment brown basally and black apically, minutely pubescent; second segment brownish with concolorous setulae along postero-apical margins; third segment broad, rounded, flattened, base reddish-yellow and apical part black, black, hollow, rounded spot along inner side near base; arista longer than antenna, three-segmented, dark-brown; bare. Cheeks shining black; dark-brown pile along extreme side margins.

Thorax before transverse suture and pleurae medially densely light yellow pilose; dorsum behind suture black with concolorous long pile; scutellum black, dusted yellow; long, yellow pile.

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